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AVIATION

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GENERAL MANAGER

Vol. XII

JUNE 12, 1932

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AVIATION

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Lacking Air Legislation

URING the dedication exercises of the Lincoln Memorial in Washington, D. C., a civil airplane flew over the assembly at such a low height that the dress of the guests in these prevented the people from hearing the words of the President. Considerable indignation was expressed by the press over this breach of etiquette, which was the more reprehensible as the aviator in question had been requested beforehand to keep, during the exercises, outside a two-mile radius of the Memorial.

Truly, the evils of unrestricted flying could not be better illustrated than by this incident. When the Commissioners of Washington sought to prevent the aviator concerned, they found that there was no legal provision for such a case. While government aircraft are strictly accountable for their movements, and their operators can be punished for infractions of the rules, civil aircraft are not amenable to such discipline. Therefore, the best the Commissioners of Washington could do was to introduce on Congress a Bill authorizing them to regulate civil flying on the District of Columbia. As the probable result, another piece of sectional air legislation will be added to the laws enacted by a dozen States for the regulation of civil flying.

In the meantime the Warren Bill, which passed the Senate, is still in the Committee on Interstate and Foreign Commerce, where it has now been resting for quite some time. Just what will it take to make Congress give an federal air legislation?

The National Balloon Race

THE results of the thirteenth National Balloon Race are highly creditable to the three branches of ballooning which entered it—Army, Navy and Private, for each of them had a representative in the three leading places. The composition of the American team which is to enter the international Gordon Bennett Balloon Race, next August, is Westervelt, who thus far truly representative of American ballooning.

The Army, which this year won the National Balloon Race for the first time in the history of that event, is to be congratulated upon its splendid showing, which affords the best proof of the high degree of skill and knowledge of our military aeronauts. The Naval and Airship Divisions of the Air Service may justly be proud of Major Westervelt, its chief, who represented it so worthy in the open field of competition.

H. E. Hemphill, one of America's veteran balloonists, who headed several, worthily upheld the glorious tradition of amateur ballooning to which this sport owes practically all of its early development.

The Navy likewise deserves congratulations, not only for the performances of its entrants, but also for the right spirit it displayed in entering in the race an experimental balloon,

filled with helium. This new non-inflammable gas, of which little is known as yet beyond theoretical speculations, has earned a balloon safety over 400 miles, and Commander Neale's report on its behavior under varying atmospheric resistances will be awaited with considerable interest by all aeronauts.

The Brenner Helicopter

SOME months ago the British Ministry of Munitions announced that it would award a prize of £50,000 to the constructor of a helicopter capable of the following performance, carrying a pilot and one hour's fuel: first, run to 2,000 ft. height, second, hover without any horizontal motion for half an hour in any wind up to 50 m.p.h.; and third, by horizontally at a speed of 50 m.p.h.

These requirements are vastly in excess of anything that has hitherto been achieved with "lifted sail" machines. As is matter of fact, with one known exception, no helicopter has risen from the ground above fifteen or twenty feet, or hovered. The one exception known is that of the Austro-Hungarian napier helicopter, built during the late war by Captain Petzony, Prof. Karman and Herr Zarow, which made a number of successful ascents and on one occasion reached a height of 500 ft. An exhaustive investigation made of the subject by Prof. Karman shows that satisfactory stability is extremely difficult to achieve in a helicopter, and it was to simplify the problem that the Austro-Hungarian helicopter was made captive. The trials demonstrated, what was expected, that when the mounting cables were taut, the helicopter would be stable; but as soon as any slack appeared, the machine would assume an oscillating motion.

In view of all the above it comes as a distinct surprise to read in the New York Times, in an exhaustive dispatch from London, that Louis Breguet, in a sort of the gyroplane, and of the torpedo which hangs from it, "has gained fresh laurels by completing experiments with a helicopter which is understood to meet fully the conditions laid down by the British Air Ministry for a machine of this type."

Balloonists dispatched, however, seem to modify this news. It appears now that Mr. Breguet has not yet made free flight tests with his machine, but bases his hopes chiefly on experiments conducted with scale models. In fact, the Breguet helicopter has not yet been tested outside of the hangar in which it is housed.

The pronouncements which the New York Times has given this report shows on what extent the idea of "vertical flight" appeals to public imagination, and at least morally on the factual ground that it will make flight to land on house tops. It would be desirable that similar experiments obtain the same amount of publicity—but judging from the way in which Breguet's great 21 m.p.h. flight was treated by the press this hope seems little founded.

Army Wins 13th National Balloon Race

Maj. Oscar Westover, A.S., the Victor with 850 Miles --
H. E. Honeywell is Second; Lt. W. F. Reed, U.S.N., Third

Under the auspices of the Army Club of Milwaukee thirteen balloons, piloted by some of the most noted aeronauts of the country, started from the city, and prizes worth \$10,000 were offered to the National Balloon Race held May 21 at Milwaukee, Wis. The purse that year ranged from \$1,000 for first prize to \$500 worth prize. The sum of \$100 was also given each pilot who actually started. In addition to these relatively high cash prizes, the first three winning pilots will receive the honor of being chosen to represent the United States in the coming International Gordon Bennett Balloon Race scheduled for the fall in France. The start was on May 6, 1922. One can readily appreciate what all of these very able aeronauts, Indiana, the interest that has been shown in the race and sense the keen rivalry displayed among the competing pilots.

The Order of Start

On the thirteen entries, two were Navy and those were Army balloons. The drawing for position and starting order gave the following results:

	Capacity	Balloon Name
1	50,000	Wisconsin Queen
2	50,000	Army I
3	45,000	Wisconsin
4	75,000	Milwaukee Journal
5	75,000	State "Milan"
6	80,000	Wisconsin Club, St. Louis
7	75,000	Army II
8	50,000	Army III
10	80,000	Army IV
11	80,000	Advertising Club of St. Louis
12	72,000	Georgiana II
13	78,000	Uncle Sam

The National Balloon Race is a race for distance only, the balloons circling the greatest distance from the starting point, measured as a great circle from the start, being the winner. The balloons in the race are relatively light, and it is necessary to limit the maximum of their load to 50,000 cu. ft. No intentional intermediate landings can be made and no unintentional intermediate landings must last more than 15 min. The final landing must be made on land. Water landings, however, are not necessarily disqualifying provided the pilot can land hard and touch his balloon (including all essential gear) without damage to his equipment outside and. These aeronauts, however, are not allowed to make any non-technical revolutions, other than one, when needed to the balloon, the contestants have a large degree of freedom in their choice of balloon type, size, basket and equipment.

Some Competitive Details

Full advantage of size was not taken by several of the pilots. Mr. Donaldson took off with only 40,000 cu. ft. The others were loaded up to maximum size, 50,000 cu. ft. All of the representative types of balloons were present, single and double pyramidal balloons with entwined tails, also a single pyramidal balloon which the Army brought along. This has the so called "bulletin" suspension, the foot rope running up to a ridge below the equator of the bag, the loads then passing into the relatively heavy (and strong) fabric and thence up to the top.

Commander Northcutt had a rather interesting bag, it originally had a fabric trunk leading up to the top, and a

large ladder hung down through this trunk, allowing the pilot or pilot to climb to the top of the balloon and make minor repairs. As no ladder was used on the lower half of the bag, resulting in it passing to take on the top, the face of the same, whenever it passed, showed the usual valve gas. These features were very novel and desirable but omega the nature of a balloon race, in which every available point in the form of disintegrating balloon counts as so many easy miles, it was decided to remove the internal trunk and the ladder. The bag was a single-ply rubberized balloon of the cotton type, the basket being made up of the foot ropes, which were folded to the ropes to make a double thickness in the center of the girdles, and these converge up to the valve ring. There were fifty-four of these silk cords placed circumferentially around the bag and extending to the top. During inflation an auxiliary net is required to cover one of the bags this could be left behind or taken along and disengaged as balloon.

Pilot	Age
Gen. F. Donaldson	51
Maj. Oscar Westover	41
Ralph H. Upson	34
John Berry	37
Com. J. F. Northcutt	34
Lt. W. F. Reed	27
J. B. McElroy	32
Walter E. Reed	27
Lt. James T. Nally	27
Capt. H. E. Weeks	31
H. Von Hofmann	32
W. T. Van Orman	27
H. E. Honeywell	27

The Nansen Balloon

The most novel feature of all however of Commander Northcutt's balloon is that it was filled with helium instead of gas. The Navy is a desire to educate and bring to the attention of the public the safety and practicability of balloons in flight-inflation or earth-weather, as well as to obtain valuable experimental data, had used to Milwaukee about 500,000 cu. ft. of the non-inflammable gas, to be used in Commander Northcutt's balloon.

The fact that the A.A.U. rule state that the same gas must be used by all contestants, gave the Contest Committee some difficulty as to what to do about a helium-filled balloon. With a truly sporting attitude every one of the pilots desired to see Commander Northcutt's balloon participate in the race as an equal competitor, but as no practicable solution offered itself, it was just decided to let Commander Northcutt's experimental craft and switches down on prior participation. In recognition of the act it was voted to recommend to the Army Club of America that in event of Commander Northcutt making a credible showing in distance, he be so honored as alternate pilot in the Gordon Bennett race. From the fact that the properties of helium are considerably different from those of air, the more thermally stable, the different being less, it will be very instructive to learn of Commander Northcutt's observations taken during the flight.

Weather Forecasting

Balloonists are generally agreed that the most important qualification of a balloonist is ability to "slop out weather

conditions." The demand for weather charts and upper air readings was greater than ever this year. At this point it is right to state that the members of the Weather Bureau, representing the desire for weather information applicable to aviation, have heartily cooperated and extended every facility to satisfy these desires.

The Weather Bureau was originally organized to take care of agriculture and navigational interests. Now that weather forecasting is also important in aviation, it is necessary for the Weather Bureau to recognize and extend its operations to take care of the new interest. That it has been valiantly trying to do, but the results are as yet not all that

one envisions making new use brought out to the form of instruments. "Fender Balloons" are being used by many pilots this year. These are small toy balloons which can be sent about and below the main balloon in order to determine the direction and form of the winds at those places, thus saving a word balloon in futile attempts to get into head winds. Vane-balloons, altimeters, stroboscopes, barographs, thermometers, aneroid and some form of aneroid to determine ground speed are some of the instruments being used. The one conception mentioned above is now an instrument developed by Mr. Upson to measure the amount of balloon required to be thrown overboard, at the moment of gas to be saved in order to keep the balloon in static equilibrium at any altitude. In principle the instrument consists of a combination variometer and aneroidometer, it induces any change of altitude of the balloon whether due to unstable weight equilibrium or to rising or descending air currents. An instrument of this nature is of very great utility not only for free ballooning in order to save balloon, but especially for long distance flying when affecting a landing.

Other Interesting Equipment

Perhaps the most elaborate equipment of the balloons entered was carried by the two Navy craft.

Commander Northcutt's balloon being inflated with helium, added materially to his load on the trip on that the non-inflammable gas would have no tendency to his heart's content, and one cook had to be sent to his heart's content.

Both Navy balloons carried radio, but Commander Northcutt's was the only one to have a separation of the experience of Lieutenant Edward H. Weeks and Kline, in December, 1920, when they landed near the Shoshone River and were lost in the Canadian wilds for three days, threatened with starvation.

Both Navy balloons carried radio, but Lt. Weeks had a separation of the experience of Lieutenant Edward H. Weeks and Kline, in December, 1920, when they landed near the Shoshone River and were lost in the Canadian wilds for three days, threatened with starvation. In addition to the standard balloon instruments the Navy balloons carried charts and maps of Canada and of all states north and east of Milwaukee, thermometers, aneroidometers, fuel oil, kerosene, lanterns, very sensitive potentiometers, film in projector, a folding boat and film, emergency packages, and a rifle or revolver with ammunition. They even carried some carpet ticks as the aeronauts might build a cabin out of the balloon fabric in the event of landing in the vicinity of savage Indians. Each pilot had a five-hand rule for the high altitudes and latitudes which they might reach.

Although Lieutenant Reed, the pilot of the Navy's hydrogen balloon, could not carry a stove or load for cooking his food by fire, he had a radio, and he would take a coil of unclashed lines and a bunch of sticks with him, and roll up coffee and eggs by writing the lines with them. The food was carried in several aeronauts suspended across the gas balloon basket, bread, meat, eggs, beef, bacon, sugar, salt, pepper, beans, powdered sugar, and dried figs, cans of water. The latter were hung over the sides of the basket and could be used as balloon as well as drinking water. Water was furthermore carried in four canteens.

Some Personnel

As has been said above, the competing pilots come from the best of the country for precision. Because of the extreme importance of a balloon in ballooning, having a knowledge of experience to back him in the most difficult circumstances.

Ralph Upson is probably the best known of the aeronauts, having been connected with various phases of ballooning for the past fifteen years. He is both an airship and a balloon pilot of note as well as a distinguished ship's engineer. He has participated in many of the past national balloon races, winning the one held in 1920, and winning the year of the International Gordon-Bennett Balloon Race held in 1921.

Herold Von Hofmann and Wade T. Van Orman have likewise part in many national and international balloon races, the former covering the second greatest distance in the last Gordon-Bennett Balloon race, but being charmed out of his landing in the Irish Sea, some 15 miles off Dakin. Mr. Van Orman likewise competed in the 1921 Gordon-Bennett race and did J. C. McElroy in the capacity of Mr. Von Hofmann's aid.



Major Oscar Westover, A.S., winner of the 13th National Balloon Race, and the radio set he carried on board.

The Use of Radiophones

Wireless telephones offer considerable possibilities in connection with these weather reports and during the race, through the efforts of Ralph H. Upson, it was arranged to have weather information broadcast from various wireless stations. Mr. Upson organized a radio station at Milwaukee, and Commander Northcutt, his helper, had a radio and a high-speed telephone transmitter, with which he was able to pick up these weather reports and utilize this information in choosing the right winds. The radio consisted of a loop of wire around the equator and one trailing wire hanging from the basket. The uppermost wire weighs about 45 lbs., 30 to 35 of which can be used as ballast. If necessary, without sacrificing any very valuable parts.

Major Westover's balloon was also equipped with a radio.

The value of weather information after the start of the race is of course obvious. Heretofore most of the time of the several days out on the race, consisted in spending and guessing as to what had happened to this or that "High" or "Low," consequently the practical utility of the apparatus will be doubtful compared to the use of available balloon which it reveals. Mr. Upson and Major Westover's reports on the race should be particularly interesting.

The French Gliding and Soaring Competition

Competition for 100,000 Francs of Prizes to be Held
Next August Under Patronage of French Air Minister

The French Gliding and Soaring Competition, which is officially known as the First International Congress of Motorless Flight, will take place from Aug. 6 to 26, 1932, in the vicinity of Clermont-Ferrand, Auvergne. The actual scene of the competition will be the Puy de Conquegras, a hill situated westward of Clermont-Ferrand, where atmospheric conditions are particularly favorable for gliding.

The competition will be for the American "Prairie" Advanced, which is particularly concerned with materials and model flight, and it will be under the patronage of the French Air minister, Georges Rytiere. Prizes totaling 100,000 francs will be awarded for various performances as specified below. The competition is open to Albatross and similar aircrafts and gliders only.

The machines must be of the heavier-than-air type, and must be provided with a motor of 100 h.p. The motor, its motor, motor, propeller, and engine, must be capable of raising the machine, so that a combination of pitch and "sustent" will not be required. Machines will be examined by competent judges, and must satisfy them as to structural strength and general aerodynamic qualities. Flights, before being allowed to compete, will be required to give a demonstration of their ability by remaining aloft for at least 300 sec. Competitors may commence practice flights and preliminary runs from Aug. 6 to Aug. 15, and the competition will begin on Aug. 16. All machines must be registered with the French aeronautics authorities, provided by the French meteorological office, and a representative of that institution will be present to witness competition in the reading of graphs.

The Events

The meeting at Clermont-Ferrand will be devoted to various events, on, or in the official program terms, these experiments:

Distance Flights—First prize of 3,000 francs, 5,000 francs, 10,000 francs, and 20,000 francs. The machine, which competitors must start from the Puy de Conquegras, but may fly in any desired direction and alight at any point. The machine must remain in the air for more than 3 min. in order to qualify for these prizes. Prizes will also be awarded for aggregate duration; all flights made, in whatever section, remaining beyond this, on long as they are, of more than 300 sec. duration. The prizes are 10,000 francs, 3,000 francs, 2,000 francs, 1,000 francs and 500 francs.

Distance Flights—Prizes of 10,000 francs to the machine, which competitors must start from the Puy de Conquegras, but may fly in any desired direction and alight at any point. The machine must remain in the air for more than 3 min. in order to qualify for these prizes. Prizes will also be awarded for aggregate duration; all flights made, in whatever section, remaining beyond this, on long as they are, of more than 300 sec. duration. The prizes are 10,000 francs, 3,000 francs, 2,000 francs, 1,000 francs and 500 francs.

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The time in the air must be more than 2 min. and the ratio of descent to less than 1.50 or 1.51 per sec. If Δ is the difference in height (in meters) between starting and alighting point, and t the duration in seconds of the flight, the result of descent will be $\frac{\Delta}{t^2}$ in meters per second. If t const. then

L

Time in less than 1.5, or $\frac{\Delta}{t^2}$ greater than 1.5

A New German Aeronautical Engine

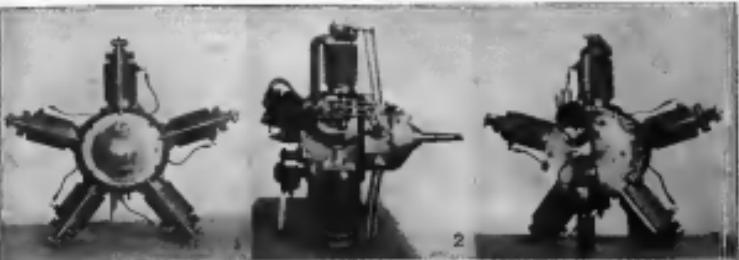
Siemens-Halske 50-60 h.p. Air-Cooled Radial Engine
First Example of German Post-War Commercial Design

By Erich Hildebrand

Altogether very few new aircraft engines have been brought out since the end of the war, and such as have been placed on the market were almost entirely military types which were used in the production stage during hostilities. The Siemens "Lora" is perhaps the best known of such engines, since despite its high cost it is being widely employed on the aircraft operating on the Leipzig-Faßberg service. On the other hand it is known from British parliamentary announcements

extender models. The first specimen of the smallest model was turned out before the German government had agreed to share the fate of Alkali vein, that the original plan of suspension of all aircraft construction did not automatically cease to be six months after the signing of the peace treaty of Versailles.

The first result of this commercial revival of the German aero engine industry has already been referred to in connection



Front, side, and rear views of the 50-60 hp. Siemens-Halske radial air-cooled engine

that the A.B.C. radial engine was put in production under the stress of war before they had been developed to the point of meeting satisfactory service. In the case of the German radial air-cooled engine Mr. Siedle, their designer, was fortunate enough in finding in the Bristol Aeroplane Co. a concern willing to spend the money required for completing the "long way" of the 100 h.p. "Ludwig" and the 150 h.p. "Fagot" models, which are now available for commercial use.

While France has brought out several high-powered engines of V, W, and X types, which were a result of the continuously increasing demand for greater power in military applications toward the end of the war, it has not produced any new radial engines, the Anzani and the Salmson being both developments of pre-war designs. In the United States the government support given the new radial engine developed by the Curtiss Aeroplane and Motor Co. as an indication of the manner trend of thought in engine design.

German engine construction during the war mainly centered upon the production of radial air-cooled types, developed from experience gained practice, but specialized by the addition of superchargers. Only for use in pursuit machines were other types developed, such as the Oberursel and Siemens-Halske rotaries, the former being an adaptation of the Gnome, while the latter was the original Gnome. The Siemens-Halske 50-60 hp. model was of the pusher or differential motor type, an arrangement which had not previously been used in a commercial engine. This engine was enlarging the production status of the firm of the Aeronautics, which stopped further work.

On the ground of the experiences thus obtained in the construction of air-cooled engines the Siemens-Halske company has now taken up the manufacture of a radial type of engine, employing a single cylinder unit for five, seven and nine

Drag of Navy Strut No. 1 Modified

N.A.C.A. Report No. 137

This report of the National Advisory Committee for Aeronautics, A. F. Edison, R. E. Lusk, and G. C. Bill, deals with the results of tests on struts conducted at the Washington Navy Yard. Two models of the modified Navy strut, No. 1, were tested in the 8 by 8 ft. wind tunnel. The tests were made to determine the total resistance, and effect, and the pressure distribution at various wind speeds with the length of the strut transverse to the current. Only the measurements made at zero pitch and yaw are given in this report.

Des Moines-Chicago Airway

The Curtiss-Iowa Aircraft Corp. of Fort Dodge, Iowa, announces that it expects to have in operation a passenger airplane service between Des Moines and Chicago sometime in June. A small passenger-cargo airplane, fitted with 200 hp. flat engines, will be used on this line, with one ship operating each way every day.

According to the schedule, a person may leave Des Moines at 7:30 in the morning and arrive in Chicago at 10:30. Return to Des Moines is 3 o'clock in the afternoon of the same day. The trip between the two cities will be made in 3 hrs. 15 min., according to the schedule. Ships leave Des Moines at 7:45 as the returning flight arrives in Chicago at 10:45 in the morning. Returning planes leave Chicago at 2 o'clock in the afternoon and arrive at Des Moines at 5:30.

A rate of 15 cents per mile will be charged by the announced planes, which are to begin operations in June.

Improvements, approximating \$10,000, will be made at Des Moines Field, the airport at Des Moines, as soon as the Chamber of Commerce drive is completed. Two hangars, machine shops, a garage, oil and gasoline filling stations, and wireless equipment are among the improvements to be added.

A proposed north and south air mail line, to include Des Moines, is to be surveyed by the Air Mail Service, independent of the federal government. The Air Mail Service, at the present time, is in the process of surveying the Des Moines field was inspected by Mr. Drapery recently, and pronounced suitable for an air terminal.

W. B. Swanson of Fort Dodge, Iowa, organized the Curtiss Iowa Aircraft Corp. a trifle over five years ago. He purchased one plane at that time and leased the field at Fort Dodge. The field is now known as the Curtiss Field at Oelrichs, Ia., Fairfield, Ia., Fort Dodge, Ia., Des Moines, Ia., and Minneapolis, Minn. Existing Des Moines field is equipped with hangars, and facilities for taking care of planes which may come up. Des Moines will be equipped with the same service this year. The stations are not yet equipped with wireless but this will also be provided as soon as possible. Planes are to be used, and a general aerial passenger and express service is contemplated.

A schedule passenger service from the Minneapolis, Minn. field to Chicago is now in operation, and will gradually be extended East and West. Five more well equipped fields will be established this fall and next spring in the state of Iowa to facilitate air mail delivery into the most tractable areas. An air mail line from Des Moines to Chicago is to be made in the spring from Kansas City through Des Moines.

The Curtiss Iowa Corp. has a very liberal arrangement to make with any city interested on the same lines of either the North and South or East and West route. The town has merely to develop a reasonable amount of business for the corporation and return resources a well equipped field operated the year around by a responsible and experienced manager.

In offered and tested fields will be a very small outlay of capital and reduces them of all expense of main training areas.

The Des Moines service reaches any point on the state of Iowa in 100 hours, and frequent trips are at present being made to Kansas City, St. Joe, St. Louis, Omaha, etc. Several privately owned ships are take care of at the field and pilot services given them at any time desired.

The Decay of a Simple Eddy

N.A.C.A. Report No. 144

This report, by H. Bateman, of the National Advisory Committee for Aeronautics, deals with a generalization of Taylor's formula for a simple eddy. The discussion of the properties of the eddy indicates that there is a slight analogy between the theory of eddies in a viscous fluid and the quantum theory of radiation. Another exact solution of the equation of motion of an eddy, this year, a result which reminds one of the well-known instance of instability in the case of a horizontally stratified atmosphere.

Aviation in Congress

March 23, 1922—April 15, 1922

March 13. **Airways.** Dissolved from previous bulletin. Mr. McMillan reintroduces H.R. 115, 175 million dollars for the purchase of aircraft from any foreign nation, citizens, or corporations.

March 21. **Aviation.** Executive document 572, transmitting supplemental estimate of appropriation for the Navy Department for the fiscal year ending June 30, 1923, for salaries, "Bureau of Aeronautics," \$60,000, as a sum sufficient for the estimate entombed in the budget of \$45,350, and for "team, enlisted, and supplies of the naval petroleum reserves," \$100,000 (H.R. No. 219), to the Compt. as appropriate.

March 23. **House.** Mr. Larson introduces into the record a letter from an Attorney, H. M. Doherty, to an aviation engineer. That he appears here attached to a suit which may made possible by a recent decision of the Court of Claims. The fee was to be one third of the amount collected. For all the cases resulted as a result of this decision, the lawyer would receive about \$1,000,000 for his services on the basis of 1/3 of the amount collected.

March 26. **Airways.** Airway appropriation bill defeated. The cost of helio navigation and more extensive experimental work at McCook Field defeated.

March 29. **Senate.** Mr. Hull in discussing the Naval Disarmament Treaty maintains that the day of the battleship is over and that the airplane is one of the new weapons of warfare.

April 5. **Senate.** Mr. Walsh of Massachusetts introduces a Senate bill (2305) proposing the establishment of a school of aeronautics.

April 6. **Senate.** Mr. Walsh's resolution (see above) read again and bill made for more complete data.

April 7. **Senate.** Mr. Brewster (H.R. 11385) to encourage commercial aviation and authorizing the Postmaster General to contract for air mail service and prescribing rates of transportation and postage thereon; to the Committee on the Post Office and Post Roads.

April 11. **Senate.** Mr. Woodruff introduces a resolution authorizing a Committee to investigate war contracts and of purchases. Brings into the discussion the subject of aircraft contracts.

In introducing many bills (H.R. 11229) value of bombing units shown.

April 12. **Senate.** In discussing the navy bill (H.R. 11228) the question of the no. of personnel in the navy service was brought up. Mr. Frost believed there was no basis of comparison between the British air force and the American as the British was an offensive force and ours a defensive force.

April 18. **Senate.** In discussing the Navy appropriation bill (H.R. 11228) the aviation appropriations were discussed. The bill calls for a total of \$7,500,000 Mr. Hale offered an amendment increasing the sum provided for overhauling planes from \$5,475,000 to \$7,500,000.

April 19. **Senate.** Amendment of Mr. Eliot's reported (See above),—discrepancy Chamber of Commerce

The Farman "Super-Sport"

The Farman company has just produced an improved model of the "Sport" airplane which attracted so much attention at the Kansas City and Omaha fairs last year. The new model, which is called the "Super-Sport," is shown in the accompanying illustration, from which it will be seen that it resembles in its outline the Farman "Sport." Special attention has been paid in the new model to interchangeability of parts and simplicity of alignment, while the power plant con-



The Farman "Super-Sport," fitted with an 80 hp. Le Rhône engine, on which Captain Gaspard, the French ace, is touring France.

sum of either an 80 hp. Le Rhône or a 90 hp. Anzani engine. Following are the principal characteristics of the Farman "Super-Sport," which is represented in the country by Walker-Kellon, Webster Bldg., Philadelphia, Pa.

CHARACTERISTICS OF FARMAN "SUPER-SPORT"	
Span	27 ft. 8 in.
Cross section	20 ft. 8 in.
Length overall	31 ft. 4 in.
Height	4 ft. 4 in.
Wing area	280 ft. ²
Weight empty	1,000 lb.
Weight loaded	1,800 lb.
Speed	90 mph.
Flight ceiling	10,000 ft.
Endurance	1 hr. 30 min.
Flight speed	100 mph.
Radius	100 miles.

Valuable Shipment of Dresses by Plane

Flown by Wm. N. De Wolf, a Fokker F.II monoplane left Curtiss Field, Memphis, Ia., at 1:30 p.m. May 23, with a shipment of thirty packages of ladies' dresses, arranged to the Brugge Department Store of Baltimore, Md. Delivery of the dresses was made to the store before closing time the same day.

The Baltimore department store had advertised a special sale and wanted to hold it on the evening of May 27, but when a contingent they were to have received by express. Learning that the shipment would not be received by ordinary means of transportation in time for the sale, the store sent their buyer on a hurried trip to New York to arrange for the goods to go by airplane of possible. As a result the Fokker plane was engaged and succeeded in delivering the dresses in time for the store to make good its advertisement.

Probably the first insurance policy in this country on a commercial shipment of merchandise by airplane was written on the engagement by the Home Insurance Co., of New York for \$1,500.

Cincinnati News

In connection with the organization of the Cincinnati municipal airport, which is to be one of the best in the country, the Cincinnati Aircraft Co. is establishing a department of representations.

This service will include office, directory and phone, thirty letters per month, weekly reports of aeronautical activities in the Cincinnati zone, personal calls on your prospective en-
towers under your direction, local publicity (news items) and

daily routine requirements. A competent person will be in charge at all times and will be available at all times.

Captain Max, U. S. A. Air Service, who is in Cincinnati arranging the Air Reserve expedition as announced at The Army meeting on April 10 stated that the work was progressing, and that the squadrons officers had been selected. No field as yet has been selected.

C. H. Treadt, who recently conducted the Aircraft Sales Co., and the Pan American Exchange, announced his retirement.

H. H. Field, Secretary of the Cincinnati Aircraft Co., is building up a Sales Organization throughout Ohio, Indiana, Kentucky and West Va. Estimated assets in Mississippi funds to become in being sometime in the autumn. Mr. Field is to be congratulated on the unusual method he has adopted. The work is of great value to those wishing to take up Aircraft Salesmanship.

C. C. Lay, is in the city and well known there for exhibition and passenger work for the present, but he hopes not for long. He will bring one ship to Cincinnati, as soon as field accommodations can be arranged.

No Landing at Montauk Point

Under instructions from the Commanding Officer of the 2nd Coast Artillery, 1st Lieut. Eugene H. Burkhardt, Air Service, Mitchel Field, was assigned the duty of investigating all possible landing fields in the vicinity of Montauk Point, Long Island, with a view to determining whether or not it would be possible to establish a permanent landing field on the Point during the field training period for the National Guard. Commandant Burkhardt conducted the survey and reported that no satisfactory landing fields are available in this vicinity.

War Department: John Schlesinger.—The Director of Sales announced that the following names, subject to change here, have been submitted to be held during the month of June by the various bureaus of the War Department:

June 13.—Washington, D. C. Airplane and engine, under sealed bid.

June 20.—Washington, D. C. Airplane engines, under sealed bid.

Airway Orders.—Capt. Howard J. Bloughland, Inf., Kelly Field, Tex., has been transferred to the Air Service as May 8, 1932, with rank from June 25, 1931. He will remain on his present duties.

Capt. William J. Fyshburn, Med. Adm. Corps, has been transferred from duty in the G.C.A. to Bell Field, D. C.

First Lt. Louis Charles A. Horn, A.S., received from duty as student at the A.S. Experimental Station Post Field, and from further orders of March 24, 1932, Capt. Horn has been assigned to permanent station at Mather Field, Calif.

First Lt. Robert H. Pease, A.S., received from duty as a student at the A.S. Experimental Station, Post Field, D. C., has been assigned to permanent station at El Paso, Tex.

First Lt. Carl L. Cawall, A.S., received from duty as a student at Elington Field, Tex., has been assigned to permanent station at El Paso, Tex.

First Lt. Charles T. McCormick and William L. Wheeler, A.S., received from duty as students at Kelly Field, Tex., have been assigned to permanent station at Kelly Field.

Naval Aviation

Admiral Moffet Takes Flight Training.—Rear Admiral Wm. A. Moffet, Chief of the Bureau of Aviation of the Navy in Italy today began intensive training in flying at Pensacola Naval Air Station. This is by no means the first time Admiral Moffet has taken the air in a plane, as he has made many flights before, but now he is to take the training necessary for an observer or spotter in the Navy, and while he may not complete the course, it is his desire that he be given the opportunity with the rest of the air force to familiarize himself with his course, which is to be a course of four and perhaps many months.

Ordinarily no officer over 35 takes flying training, but in this instance the figures are reversed. Admiral Moffet was born in 1869, and is fifty-three years of age, which should prohibit his flying, except for the fact that he is anxious to qualify if possible, and on account of requirements which state that all officers of the Aviation branch of the Navy must be qualified as observers.

The necessity for the Admiral's presence in Washington may terminate his training at least in on, but in the event that he is needed there, he will before he left for Florida that he would return by air or seaplane. In his absence Captain Martin, second in command, will have charge of Naval Aviation. Captain Martin attended the Baltimore Flying Meet on May 26.

Second Team of Landing Craftsmen.—Naval officers attached to the Bureau of Aeronautics are greatly pleased with the successful launching of the Bureau's type seaplane, carrying a pilot and passenger, from an airship catapult on the deck of the U.S.S. Maryland at Yorktown, Va., May 28.

The project of exploiting planes from a ship was first effected in 1915 on board the U.S.S. *North Carolina*, followed in 1919 on board the *U.S.S. Pennsylvania*, and in 1921 on board the *U.S.S. Lexington*. The aircraft used in these days were, however, too cumbersome and not sufficiently powerful to meet the needs of fighting ships and modern high speed planes. Consequently work was begun to produce a more compact and powerful machines which would perform that military function which even at that time it was evident would become an essential part of the datum of a man-of-war—the launching of seaplanes and observation aircraft from its deck. The way was now imminent

for the quantity production of patrol seaplanes for an automatic work-cataapult experiments on this project, and this was not until last spring that the work of which the eventual performance of the 28 was the result, was started.

This device gives the United States a point of superiority over every other navy in the world in that sense of those in possession of an apparatus of this sort.

It is the intention to equip every vessel of the battle fleet with a catapult and fighting planes. The bombing operations started at last summer by the joint forces of the Navy and Army showed the possible vulnerability of warships to bombs from aircraft, and the lesson learned from these tests is to the effect that the only way to keep our warships and our aircraft in the way of operations itself, is to use the existing flying planes on all types of ships.

Almost eighteen years ago, Samuel Pierpont Langley, the father of the Smithsonian Institution, who had already demonstrated the practicability of man-made flight, was in overhead launching device to start his steam and gas driven models, was ready enough to undertake the launching of his man-maneuvering machines. On Oct. 7 and again on Dec. 8, 1907, he made two attempts to launch his man-made machines, taking off from the deck of the *U.S.S. Langley*, but both attempts were unsuccessful, as the plane fell into the water almost before it was free of the launching ways. Later it was found that in each attempt some almost fatal accident happened, using a damping part interposed with the release at the end of the track, while on the other occasion a gap put forward struck some object on the ways and the machine struck, plunged into the water, giving the observers a thrill and Charles M. Manly, the pilot, a ducking.

Naval Orders.—Comdr. Albert C. Read, Adm. Air Squadron Atlantic Fleet, to course instruction, Naval War College, Newport, R. I.

Lat. Eng. Thomas D. O'Gorman, Adm. U.S.S. *Aracostock*; is posted to Naval Station Hampton Roads, Va.

Donald M. Carpenter, to Naval Air Station, Pensacola, Fla.

Ens. Forrest Korth, Adm. Adl. duty to temporary duty under supervision of the Navy Department. Dr. Korth was previously with a seaplane and pilot from the Key West station and started on his trip May 9, in search of new species of fish off the Florida Keys.

Aerial Search for Sheefish.—The Paul Bartels, Captain of Marine Invertebrates of the National Museum, is now on an aerial search of the Florida Keys, and the Gulf of Mexico, in search of certain species on the Florida Keys. Through the cooperation of the Navy Department, Dr. Bartels was provided with a seaplane and pilot from the Key West station and started on his trip May 9, in search of new species of fish off the Florida Keys.

Naval Air Officers at Bellows Base.—Laten. Comdr. E. W. Stowers, of Naval Aviation, represented the Bureau at the National Balloon Meet in Milwaukee on May 21. Commodore Stowers, with Laten. E. W. Stowers, and Laten. B. C. Bradley of the Marine Corps Flying Service, left Washington on a D.H. plane for Milwaukee Sunday at 9:55 a. m. They reached Fort Meade, Md., at 8 p. m., their evening, having stopped en route at Dayton, at 5:30 p. m.

Bellows Roads Naval Air Station.—For training purposes, the Hampton Roads Naval Air Station are engaged weekly in the races under the auspices of the Hampton Roads Flying-Pilots Club, with the result that the following races were won by naval aeromarines:

169 miles round—Naval Station birds first and second.
169 miles round—birds first.
369 " " " birds first and second.
466 " " " birds first and second.

In the last race the Naval birds defeated the civilian competitor by a little more than two hours.

The airship C-7 made twelve more flights during the week ending May 25, total flying time being 52 hr. 12 min. All the

passengers were unseated and repacked, and a thorough inspection of the aircraft was made.

For household pressure pads for use in testing the insulation of air pressure on different parts of the envelope during flight were invented from Washington. These pads are used in connection with the multiple manometer for measuring the pressure of the air on many points of the ship's envelope by a system developed by the National Advisory Committee for Aeronautics.

In a speed trial over a one-mile triangular course, this ship made over 23 knots, with two engines burning over at 3000 r.p.m. and at an altitude of about 550 ft. The speed of the ship was increased to 24 and 28 knots by speeding the two motors up to 3150 and 3250 r.p.m.'s respectively.

Blower-type air turbines generate 2300 ft-lbs, totaling 25 and a half flying hours for the station. The Langley detachment made practice landings, making 120 during the two weeks, as well as test runs on the damage bay with two 3040 ft-lbs.

Standard air trials on an Argentine K boat were completed recently, and tests made with the two P.T.O. equipped with 3040 ft-lbs propellers to determine the time of take-off, speed in level flight and rate of climb.

Marine Aviation

Long Distance Flights.—An experiment in long distance non-stop flying was undertaken at 1:30 p. m. on June 3 by Maj. E. H. Linnemann of the U. S. Marine Corps, when he arrived at Bellows Field after a flight of more than 1900 miles from Houston, Tex., on four days.

Maj. Linnemann left Ellington Field, Houston, early on the morning of May 21, and flew to Beeville, a distance of about 350 miles, where he spent the night. On June 1 he flew from Beeville to McAllen, Tex., a distance of 300 miles, and on the next day he left McAllen and flew to Dayton, Ohio, a distance of about 350 miles. On June 3 he completed his trip from Dayton to Bellows, a last leg of approximately 400 miles.

Maj. Linnemann was destruction in the World War when he was transferred from the Marine Corps Artillery to the command of a battalion of the 12th Field Artillery of the Second Division with which he made a brilliant record. He has taken up flying only within the past year. He is considered to be in a steady phenomenal progress during that time and is regarded as one of the most promising of the new recruits of aviation.

On May 26 two Marine Corps aviators made a round flight from Quantico, Va., to Pensacola, Fla., a distance of about 560 miles on an air line, in ten hours flying time, and with but two stops for gas.

Maj. Roy S. O'Gorman, pilot, and Sergeant Belcher, left Quantico at 8:45 a. m. and arrived Pensacola at 7:45 p. m. round time, taking in two stops the stops, and adding an hour later to a change in time. The total flying time was ten hours.

The flyers arrived at Fort Meade, N. C., at 8 a. m. and left an hour later for Georgia, Ga., where they arrived at noon, and left on the last leg of the trip at 1 p. m. Pensacola was reached at 7:45 p. m. as stated time. The three legs of the trip were respectively 260, 380 and 229 miles or a total of 869 miles.

Marine Corps Orders.—Laten. Vernon M. Guyson, Adm. Naval Air Station, Pensacola, Fla., to Marine Bases, Pierre Lassal, S. C.

Marine Flying Detachment, Haiti.—On April 25 a Marine airplane from the Fort de France station at Haiti, carried a sack from Haiti to Cape Haitien within 2 hr. 40 min. after the message call was received. The next day, Lieutenant Hall took another mail sack by airplane from Mirebalais to Cape Haitien, and three days later Lieutenant Palser carried

another from St. Michel to the Cape in about an hour and half.

The Marine Flying detachment at Haiti made two special flights recently for Congressman Hicks a visitor at the station. The flights which started from San Diego City included stops at Morelos, Playa Platina, and San Pedro de Maseras.

National Guard Aviation

Tennessee.—The 13th Squadron (Observation), Tennessee National Guard, which was federally recognized in Dec. 1931, for many weeks "trained on" under very adverse conditions. Finally, a assignment of four D-3441's arrived, and manuafacture action was started to set them up the week following the completion of the first steel hangar. In the meantime the second hangar was completed, and the four D-3's have been set up, but lack of fuel prevented the completion of motors.

Through the actions of Maj. Roy S. Linnemann, a D-3 was flown up to Eastville from Birmingham, bringing the necessary tools. He was accompanied by a mechanic, Staff Sergeant Charles C. Burch, of the 22nd Squadron (Observation). The plane was flown back on May 10, and on the next focus a D-3 was permanently assigned to the Instructor.

The 13th Squadron is now in the process of an administration building, containing an office, ordnance room, mess room, operations room, supply room, and a small medical clinic.

On June 23, 1932, Lt. Vincent J. Maloy, Air Service, formerly commanding officer of the 8th Squadron (Attack), reported to the Adjutant General's Office, and shortly thereafter the squadron launched fighters into its first bombing mission.

The field is situated on the Lebanon Pk., adjoining the Hartsong, the home of Andrew Jackson. It is about 12 miles northeast of Nashville and about two miles from the city of Hickory. The hangars and administration building border the south side of the field, which is approximately 2200 ft. square, with good approaches on all sides. A short circle, 50 ft. in diameter, marks the center of the field.

Music credit in the Maj. J. C. Bennett, Jr., Air Service, Tennessee National Guard, the officers and enlisted men of the association, Maj. Roy S. Linnemann, former Adjutant General, and Brig. Gen. F. L. Hart, the present Adjutant General, for their perseverance, hard work and determination in getting the 13th under way. A word of praise is also due the Nashville Commercial Club for their efforts in behalf of the squadron.

Coming Aeronautical Events

AMERICAN

June 21-27.—**Flying Meet, Macon, Ga.**
Sept. 6.—**Second Annual Water Derby, Bakersfield (California Marine Flying Triple Competition).**

Sept. 10.—**First Annual Intracoastal Championship Meet (in preparation).**
Oct. 15-16.—**Second Annual Derby, Bakersfield (California Triple Meet).**

FOREIGN

August.—**Coupe Japonais Schneider, (Seaplane speed race), Nippon, July.**
Aug. 8.—**Grand Bateau Balloons Race, Grecce, Switzerland.**
Aug. 22.—**Second Flying Competition, Clermont-Ferrand, France.**
Aug. 24.—**Seaplane and Gliding Competition, Gengenfeld, Germany.**
Sept. 23.—**Coupe Saint-Denis de Marseilles (Seaplane speed race), France.**
American athletes invited. If required, to be held about Aug. 23, at Marseilles Field, L. L.

Foreign News

Italy.—Under the auspices of the Federazione Aeronautica Nazionale Italiana and by initiative of other aeronautical associations, an international competition for commercial airplanes is to be held during the last week of June 1922. The course is to be three times the circuit bounded by the cities of Turin-Cuneo-Alexandria-Novara-Biella-Turin (683 miles). The competitors, besides the places of start and arrival, will have the possibility of landing twice, being allowed to replenish with fuel. The classification will be settled by the following formula:

$$K = \frac{Vc}{V_{min}} \frac{P}{Q}$$

where Q indicates the commercial load of the machine expressed in kilograms; P the weight in kilograms of the fuel consumed in the competition; Vc the commercial speed of the airplane, expressed in kilometer-hour; V_{min} the lowest speed in kilometer-hour which the machine can assume.

The aircraft for which the value of Vc should result inferior to 120 Km. p.h. will not be allowed to compete for any prize. The commercial load must not be inferior to 300 kg. not counting the weight of the pilot, which is counted as 80 kg. in every case.

A prize of 40,000 Lire will be awarded to the constructor of the winning machine and a prize of 10,000 Lire to the pilot of the aforementioned machine.

At the last session of the Chamber of Deputies a bill was passed providing for the constitution of a High Council for the Aeronautics and of a Technical and Administrative Committee for the Aeronautics. The Council will be composed by the representatives of the various aeronautical categories, viz. industrial and technical staff, corporations of propaganda and the aerial navigation enterprises. With the institution of the above council and committee, the existing Committee of Aeronautics is to be suppressed. The new bill will be presented to the Senate for approval.

* * *

France.—The Franco-Romanian Air Navigation Co., which has been running an air service from Paris to Prague and Warsaw, is now about to inaugurate an extension of their service from Prague to Vienna to Budapest. The new service is to run three times a week, and the time taken will be two hours from Prague to Vienna and about $1\frac{3}{4}$ hr. from Vienna to Budapest.

* * *

Great Britain.—Since April 1 the Handley-Page Transport, Instone Air Line, and Daimler Hire (Limited) receive the air subsidy for their services on the London-Paris route under a new scheme. The new conditions are that the government will pay a subsidy of 25 per cent on the gross takings; will provide not more than half the operating fleet on the hire purchase basis, and will give an additional grant until Feb. 28, 1923, of £3 per passenger and 3d. per lb. of goods carried.

* * *

The Netherlands.—The Fokker Airplane Works at Veen, Netherlands, are now executing an order for ten Fokker Model F3 cabin monoplanes, fitted with 360 hp. Rolls-Royce "Eagle" engines, which are destined for the Koenigsberg-Moscow airway. This service was inaugurated on May 1 by the Russian-German Air Navigation Co. with four Fokker monoplanes of the same type. The machines are of Russian registry, as denoted by the nationality mark "RU" which appears on both wings and fuselage. This is the first time aircraft of Russian registry appear in international traffic. The registration mark of Russian civil aircraft consists of numerals, as is the case with German and Swiss aircraft.

* * *

Canada.—A grand catch of 50,000 seals is recorded from Montreal as the first week's haul of the Newfoundland Sealing Fleet, which was guided by airplanes to the location of the herds.



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